

## omniVISC® 1050

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## the permanently flexible ready-for-use silicone-rubber adhesive

### omniVISC® 1050

is an elastic silicone-rubber adhesive, suitable for a great variety of applications. It is in a ready-for-use condition and hardens at room temperature through contact with the humidity film existing on all surfaces and atmospheric humidity.

is particularly suitable for bonding & sealing materials of different thermal expansion, as e.g. metals, glass, ceramics, wood, tissues, leather, elastomers and duroplastic materials.

starts hardening approx. 15 minutes after ist application (formal of a film). The hardening time depends on the amount of sealant exposed to the atmosphere. Final hardening is achieved after 24 hours, or some days, depending on the application.

has good chemical resistance in the hardening conditions, e.g. against water, acids and alkalins in low concentration, fuels and lubricants, inert and combustable gases and hydraulic liquids.

can be used at temperatures ranging from -70°C to +200°C. Within this range omniVISC 1050 does not lose its flexibility.

is suitable for bonding and sealing parts with small clearances as well as for filling large gaps.

has an anti-adhesive feature. Therefore, neither lacqers nor paints or other media adhere to hardened omniVISC films.

has excellent insulating properties. Ist resistance to wear, humidity, weathering and chemicals allows ist use as a protective coating also.

is colourless and transparent with good wetting and bonding properties due to ist soft flowing consistency.

### omniVISC® 1050

offers a lot of new and rational solutions for all production an repair problems, e.g.

- as a seal, for in situ moulded sealants instead of a variety of gaskets made of paper., cork, rubber, etc., mainly in vehicle constructions.
- as an adhesive and sealant for glass, metals and lastics in the car/vehicle construction, architecture and apparatus engineering.
- for sealing or locking threads in those cases where easy disassembly is required, i.e. where even the weak omniFIT 50 M is too strong.
- for fixing aluminium name-plates and commercial sign onto rough surfaces or other materials instead of screwing or riveting.
- for bonding all kinds of substrates to plastics and metals in the automotive and apparatus industries.
- for bonding duroplastic materials to metals in the switch and relay manufacturing industry, especially where higher temperature occur.
- for filling and sealing gaps at lead-in holes for cables, tubes, apparatus, switches, lighting units, mainly in explosion-proof rooms.
- as a wear-proof and anti-adhesive protective coat for containers and silos in the chemical apparatus industry.
- as a sealant for all kinds of window shields, as e.g. in front-plates, heating furnances, gas appliances, water-meters and caravans.



**Technical Data**

Colour	colourless (transparent)	
Viscosity	Brookfield RVT, 23 °C	50.000 - 80.000 mPa · s
Film forming at 25 °C and 50 % rel. air humidity	8 - 14 min	
Specific gravity	DIN 53479	1,07 g/cm <sup>3</sup>
Shore hardness A	DIN 53505	28
Elongation to break	DIN 53504	~ 400 %
Tensile strength	DIN 53504	~ 3,5 N/mm <sup>2</sup>
Cubic coefficient of expansion		$8 \cdot 10^{-4} \text{ cm}^3/\text{cm}^3 \cdot \text{K}$
Thermal conductivity	DIN 53612	0,17 W/k
Specific volume resistance	DIN 53482	$4 \cdot 10^{13} \Omega \cdot \text{cm}$
Dielectric strengths	DIN 53481	24 kV/mm

**Packages:** 90 g tubes for manual application  
18 kg drums to be used with semi-automatic and fully automatic applicators

**Instruction for use:**

Being an one-component material omniVISC is suitable for many applications. All parts to be bonded or sealed must be cleaned thoroughly with conventional solvents (e.g. omniCLEAN).

Surfaces not to be bonded can be pretreated by applying a thin layer of conventional release agents (e.g. oil, grease, wax, etc.)

**Use as a sealant:**

Apply a uniform layer of omniVISC onto one of the surfaces and allow it to harden. Thus, the sealing layer becomes a constituent of the part. When pressing it onto the second surface, the sealant is achieved. At disassembly the sealing layer is maintained.

Another possibility is to apply omniVISC as a continuous bead on one of the surfaces and press the parts together immediately. The product is thus evenly distributed. Should a subsequent, non-destructive disassembly be required, one surface can be pretreated with a release agent.

**Use as an adhesive:**

Apply omniVISC either in a layer or as a bead on one of the surfaces. Press and fix parts together, let the closed air escape but avoid the product from being squeezed out completely.

**Use as a filler:**

Press omniVISC into gaps, corners or joints in such a way as to obtain a contact between omniVISC and the surfaces over the whole area. Should it be necessary to smooth the omniVISC surface, then this can be done some minutes after the application with a wetted spatula.

**Hardening:**

Independent of the material, the hardening process starts at the outside of the omniVISC layer (which is in contact with air). The hardening time depends on the hygrometric conditions, the extent of the air exclusion and the thickness of the omniVISC layer.

At room temperature (20°C to 25°C) and with a relative air humidity of 50 %, the hardening process starts approx. 5 minutes after the application of omniVISC 1050 and forms a non-sticky film after approx. 15 minutes. The hardening process is retarded with a lower air humidity (20 %) and accelerated with higher humidity (80 %). After 24 hours, layers of approx. 3 mm thickness have a Shore A hardness of 20 which increases to approx. 25 - 28 after 3 days. Thicker layers often need 7 days to reach these values.

**Precautionary measures:**

The vinear smell spreading during the application and hardening of omniVISC is due to the evolution of about 5 % in weight of acetic during the vulcanization process. This smell is no longer perceptible when final hardening is achieved.

In ready-use conditions, omniVISC irritates the eyes in case of direct contact. In cases of irritation wash the eyes immediately with plenty of water and see a doctor. A prolonged skin contact should be avoided.

**Storage conditions:**

omniVISC 1050 should be stored in original containers in a cool and dry room (+8°C bis +21°C).

In open containers or packages, a clot or a hardened film can be formed on the surface exposed to the air. This can be easily removed and does not affect the quality of the remaining product.

Material removed from containers may be contaminated during use. Do not return product to the original container.

If additional information is required, please contact your local Technical Service Center of Customer Service Representative.

**General information:**

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

**Note:**

The above data, particularly the recommendations for application and use of our products as well as proposals for recipes are based on our knowledge and experience. Due to different materials and conditions of application which are beyond our knowledge and control we recommend strongly to carry out sufficient tests in order to ensure that our products are suitable for the intended process and applications. Except for wilful acts any liability based on such recommendations or any oral advice is hereby expressly excluded.

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